

Amendments to the Specification

Please replace the paragraph beginning at page 13, line 20, with the following:

In the embodiments listed above, the checking functions receive function pointers which are checked against the target variable. In an alternate embodiment, the checking functions check variables instead of pointers. In both of the simplified checking functions, the variable pointer is first checked to see if it is currently referring to the target variable. If so, then assertions are made about *access* to check any current access that may be going on with respect to the target variable. In the case of the reading checking function *check_r()*, the function asserts only that there is not a write going on. In the case of the writing checking function *check_w()*, the function asserts that there is neither a read nor a write going on. If the assertions take place without creating errors, then the checking functions set *access* to indicate the type of target variable access that is about to take place. Then, continuing in block 610,[[a]] the *RAISE* macro is executed before the actual target variable access is performed.

Please replace the paragraph beginning at page 16, line 14 with the following:

Listing 730 illustrates that, in one embodiment, an atomic statement contains no further instrumentation than a call to *schedule()* and an execution of *RAISE*. This corresponds to the decision made in decision block 515 to forego further instrumentation on atomic statements.